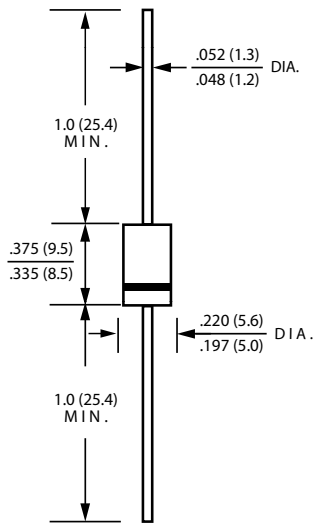




# FR501G thru FR507G



## Fast Recovery Rectifiers Glass Passivation Junction



**DO-201AD**

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Remark
FR50xG	General
FR50xG-H	Halogen Free
FR50xG-Q	Automotive

PRIMARY CHARACTERISTICS	
$I_F$	5A
$V_{RRM}$	50~1000V
$I_{FSM}$	100A
$V_F$	1.3 V
$T_J \text{ max}$	150°C

### Features

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Fast switching speed
- AEC-Q101 qualified

### Mechanical Date

- Cases: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)  
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.066 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)									
PARAMETER	SYMBOL	FR501G	FR502G	FR503G	FR504G	FR505G	FR506G	FR507G	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_F$	5.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	100.0							A
Maximum Instantaneous Forward Voltage IF=5A @ 25°C	$V_F$	1.3							V
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	$I_R$	10 100							uA
Maximum Reverse Recovery Time(NOTE2)	$t_{rr}$	150			250		500		ns
Typical Junction Capacitance(NOTE1)	$C_j$	100							pF
Typical Thermal Resistance	$R_{\theta JA}$	70							°C/W
Operating Temperature Range	$T_J$	-55 to +150							°C
Storage Temperature Range	$T_{STG}$	-55 to +150							°C

NOTES:1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC

2.Measured with IF=0.5A,IR=1A,IRR=0.25A



## Fast Recovery Rectifiers Glass Passivation Junction

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

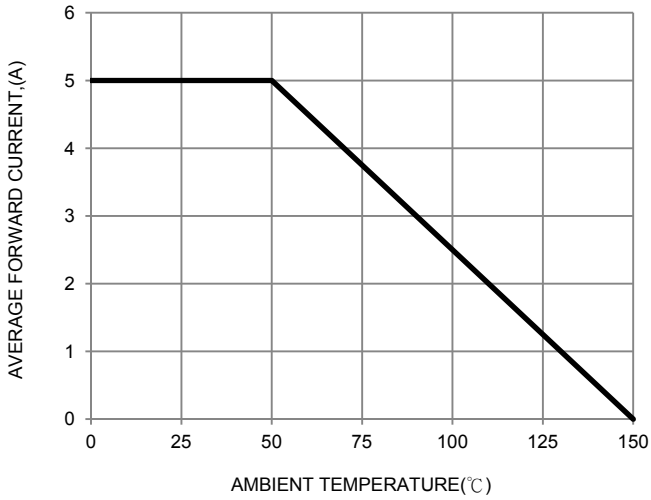


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

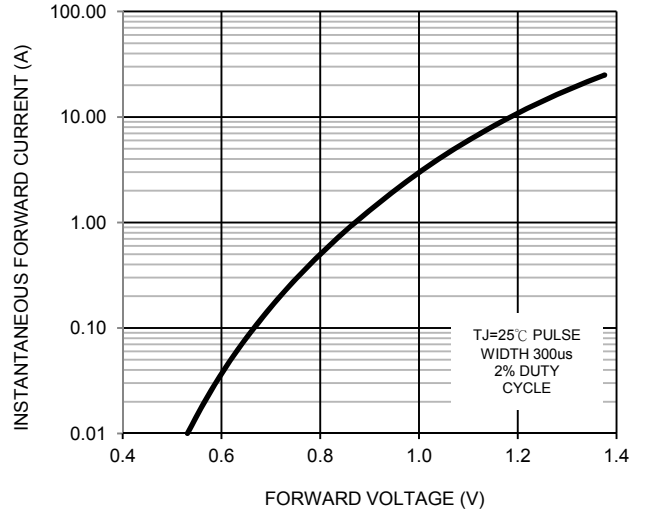


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

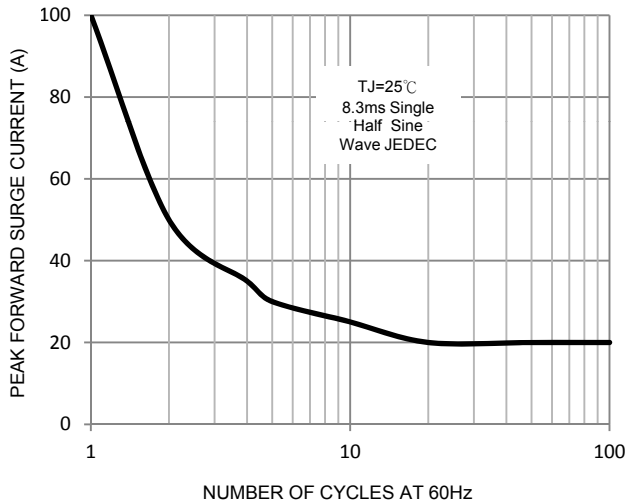


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

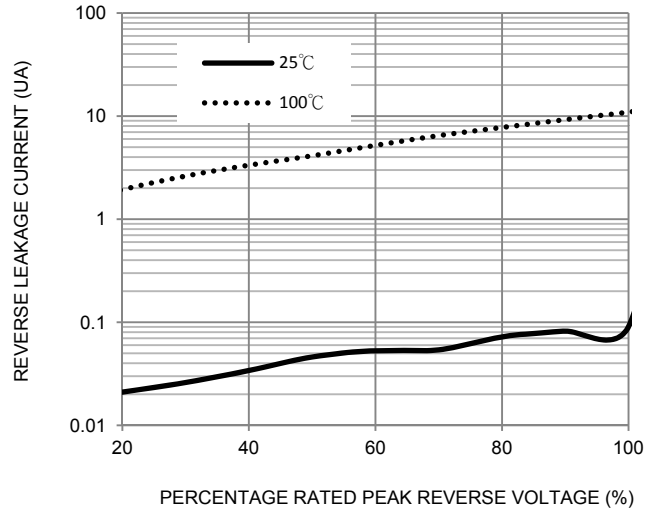


FIG. 5-TYPICAL JUNCTION CAPACITANCE

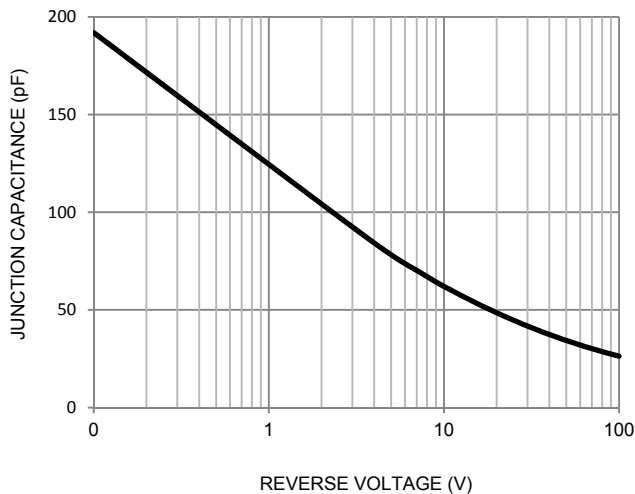


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

